DAFTAR PUSTAKA

Abdullah, B., Ilyas, S., & Tahir, D. (2018). Nanocomposites Fe/activated carbon/PVA for microwave absorber: synthesis and characterization. *Journal of Nanomaterials*, *2018*(1), 9823263.

Anam, C., Firdausi, K.S. and Sirojudin, S., 2007. Analisis Gugus Fungsi Pada Sampel Uji, Bensin Dan Spiritus Menggunakan Metode Spektroskopi FTIR. *Berkala Fisika*, *10*(1), pp.79-85.

Aslani, F., Dehghani, A., & Wang, L. (2021). The effect of hollow glass microspheres, carbon nanofibers and activated carbon powder on mechanical and dry shrinkage performance of ultra-lightweight engineered cementitious composites. *Construction and Building Materials*, *280*, 122415.

Ayyubi, S.N. and Admaja, L., 2020. Pengaruh Variasi Konsentrasi Montmorillonit Terhadap Sifat dan Kinerja Membran Kitosan/PVA/MMT Untuk Aplikasi DMFC. *Walisongo Journal of Chemistry*, *3*(1), pp.1-9. doi:https://doi.org/10.21580/wjc.v3i1.6018

Azhar, M., Efendi, J., Sofyeni, E., Lesi, R.F. and Novalina, S., 2010. Pengaruh konsentrasi NaOH dan KOH terhadap derajat deasetilasi kitin dari limbah kulit udang. *Eksakta*, *1*.

Bahtiar, A.D.M., 2012. Aplikasi serat serabut kelapa bermatrik sagu dan gliserol sebagai pengganti kemasan makanan dari sterofoam. *Jurnal Teknik Mesin*, *1*(1), pp.31-39.

Bläker, C., Muthmann, J., Pasel, C., & Bathen, D. (2019). Characterization of activated carbon adsorbents–state of the art and novel approaches. *ChemBioEng Reviews*, *6*(4), 119-138.

Caner, C., Vergano, P.J. and Wiles, J.L. (2006). Chitosan Film Mechanical and Permeation Properties as Affected by Acid, Plasticizer, and Storage. *Journal of Food Science*, 63(6), pp.1049–1053. doi:https://doi.org/10.1111/j.1365-2621.1998.tb15852.x.

Cheng, F., Yang, X., Zhang, S., & Lu, W. (2020). Boosting the supercapacitor performances of activated carbon with carbon nanomaterials. *Journal of Power Sources*, *450*, 227678.

Chusnul. 2011. *Spektroskopi IR. Instrumen Kimia Analitik*. Departemen Teknik Kimia. Politeknik Sriwijaya. 96: 103-110.

Diasmara, G., 2020. Pemanfaatan limbah ampas kopi menjadi bahan komposit sebagai bahan dasar alternatif pembuatan produk dompet. *Jurnal Strategi Desain Dan Inovasi Sosial*, *1*(2), pp.175-186.

Doménech-Carbó, M.T. and Osete-Cortina, L. (2016). Another Beauty of Analytical Chemistry: chemical analysis of inorganic pigments of art and archaeological objects. *ChemTexts,* 2(3). doi:https://doi.org/10.1007/s40828-016-0033-5.

El Gamal, M., Mousa, H. A., El-Naas, M. H., Zacharia, R., & Judd, S. (2018). Bio-regeneration of activated carbon: A comprehensive review. *Separation and Purification Technology*, *197*, 345-359.

Ellerie, J. R., Apul, O. G., Karanfil, T., & Ladner, D. A. (2013). Comparing graphene, carbon nanotubes, and superfine powdered activated carbon as adsorptive coating materials for microfiltration membranes. *Journal of hazardous materials*, *261*, 91-98.

Eslamian, M. and Soltani-Kordshuli, F., 2018. Development of multiple-droplet drop-casting method for the fabrication of coatings and thin solid films. *Journal of Coatings Technology and Research*, *15*(2), pp.271-280.

Febrianti, C., Ulfah, M. and Kusumastuti, K., 2023. Pemanfaatan Ampas Kopi sebagai Bahan Karbon Aktif untuk Pengolahan Air Limbah Industri Batik. *agriTECH*, *43*(1), pp.1-10.

Goldstein, J.I., Newbury, D.E., Michael, J.R., Ritchie, N.W., Scott, J.H.J. and Joy, D.C., 2017. *Scanning Electron Microscopy and X-Ray Microanalysis*. Springer, New York.

Gu, W., & Yushin, G. (2014). Review of nanostructured carbon materials for electrochemical capacitor applications: advantages and limitations of activated carbon, carbide-derived carbon, zeolite-templated carbon, carbon aerogels, carbon nanotubes, onion-like carbon, and graphene. *Wiley Interdisciplinary Reviews: Energy and Environment*, *3*(5), 424-473.

Han, J.W., Ruiz-Garcia, L., Qian, J.P. and Yang, X.T., 2018. Food packaging: A comprehensive review and future trends. *Comprehensive Reviews in Food Science and Food Safety*, *17*(4), pp.860-877.

Idrees, M., Rangari, V., & Jeelani, S. (2018). Sustainable packaging waste-derived activated carbon for carbon dioxide capture. *Journal of CO2 Utilization*, *26*, 380-387.

Iqbal, M., Parwati, W.D.U. and Ginting, C., 2018. Pengaruh Ampas Kopi Sebagai Pupuk Organik dan Dosis Dolomit Terhadap Pertumbuhan Bibit Kelapa Sawit Di Pre–Nursery. *Jurnal Agromast*, *3*(2), 1-10.

Jufri, M., Lusiana, R.A. and Prasetya, N.B.A., 2022. Effects of Additional Polyvinyl Alcohol (PVA) on the Physiochemical Properties of Chitosan-Glutaraldehyde-Gelatine Bioplastic. *Jurnal Kimia Sains dan Aplikasi*, *25*(3), pp.130-136.

Kılıç, M., Apaydın-Varol, E. and Pütün, A.E., 2012. Preparation and surface characterization of activated carbons from Euphorbia rigida by chemical

activation with ZnCl2, K2CO3, NaOH and H3PO4. *Applied Surface Science*, *261*, pp.247-254.

Kopac, T. and Toprak, A., 2007. Preparation of activated carbons from Zonguldak region coals by physical and chemical activations for hydrogen sorption. *International Journal of Hydrogen Energy*, *32*(18), pp.5005-5014.

Kozloff, E. N., 1990. *Invertebrates*. Harcourt Brace College Publishers, New York.

Kurniasih, M. and Kartika, D., 2011. Sintesis dan Karakterisasi Fisika-Kimia Kitosan. *Jurnal inovasi*, *5*(1), pp.42-48.

Laowachirasuwan, K. (2009). *Preparation and Characteristics of Activated Carbons from Coffee Residue by Chemical Activation Method*. Semantic Scholar, Thailand.

Lee, D. S. (2016). Carbon dioxide absorbers for food packaging applications. *Trends in Food Science & Technology*, *57*, 146-155.

Li, P., Li, H., Han, D., Shang, T., Deng, Y., Tao, Y., ... & Yang, Q. H. (2019). Packing activated carbons into dense graphene network by capillarity for high volumetric performance supercapacitors. *Advanced Science*, *6*(14), 1802355.

Lieberman, E.R. and Gilbert, S.G., 1973. Gas Permeation of Collagen Films As Affected By Cross-Linkage, Moisture, and Plasticizer Content. In *Journal of Polymer Science: Polymer Symposia* (Vol. 41, No. 1, pp. 33-43).

Liu, L., Jia, C., He, J., Zhao, F., Fan, D., Xing, L., ... & Huang, Y. (2015). Interfacial characterization, control and modification of carbon fiber reinforced polymer composites. *Composites Science and Technology*, *121*, 56-72.

Luthana, Y., 2010. *Review Lengkap tentang Edible Film, Pembuatannya dari Bubuk Pektin Cincau dan Aplikasinya*. Diakses pada 29 Juni 2024 dari https://yisluth.wordpress.com/2010/12/17/review-lengkap-tentang-edible-film-pembuatannya-dari-bubuk-pektin-cincau-dan-aplikasinya/.

Maharani, D.K. and Safitri, R.D., 2022. Karakterisasi Film PVA/Kitosan/Zeolit Tersubtitusi Ion Ag+ Berpotensi Sebagai Kemasan Aktif. *Unesa Journal of Chemistry*, *11*(1), pp.46-52.

Mamonto, O.I., Lengkey, I.L.C.C.E. and Wenur, I.F., 2020. Analisis Penggunaan Beberapa Jenis Kemasan Plastik terhadap Umur Simpan Sayur Selada (Lactuca Sativa L) Selama Penyimpanan Dingin. Journal COCOS, *11*(4), 110–121.

Mariana, M., HPS, A. K., Mistar, E. M., Yahya, E. B., Alfatah, T., Danish, M., & Amayreh, M. (2021). Recent advances in activated carbon modification techniques for enhanced heavy metal adsorption. *Journal of Water Process Engineering*, *43*, 102221.

Muzzarelli, R. A. A., and Peter, M. G. 1997. *Chitin Handbook*. European Chitin Society, Grottammare.

Nisa, K. (2005). Karakteristik Fluks Membran Kitosan Termodifikasi Poli (Vinil Alkohol) dengan Variasi Poli (Etilena Glikol) sebagai Porogen. *Skripsi*. Institut Pertanian Bogor.

Nugroho, A., Nurhayati, N.D. and Utami, B., 2011. Sintesis Dan Karakterisasi Membran Kitosan untuk Aplikasi Sensor Deteksi Logam Berat. *Molekul*, *6*(2), pp.123-136.

Omerović, N., Djisalov, M., Živojević, K., Mladenović, M., Vunduk, J., Milenković, I., ... & Vidić, J. (2021). Antimicrobial nanoparticles and biodegradable polymer composites for active food packaging applications. *Comprehensive Reviews in Food Science and Food Safety*, *20*(3), 2428-2454.

Partlan, E., Davis, K., Ren, Y., Apul, O. G., Mefford, O. T., Karanfil, T., & Ladner, D. A. (2016). Effect of bead milling on chemical and physical characteristics of activated carbons pulverized to superfine sizes. *Water research*, *89*, 161-170.

Pereira Jr, V.A., de Arruda, I.N.Q. and Stefani, R., 2015. Active chitosan/PVA films with anthocyanins from Brassica oleraceae (Red Cabbage) as Time–Temperature Indicators for application in intelligent food packaging. *Food Hydrocolloids*, *43*, pp.180-188.

Prahas, D., Kartika, Y., Indraswati, N. and Ismadji, S.J.C.E.J., 2008. Activated carbon from jackfruit peel waste by H3PO4 chemical activation: Pore structure and surface chemistry characterization. *Chemical Engineering Journal*, *140*(1-3), pp.32-42.

Rodriguez, E., Campinas, M., Acero, J. L., & Rosa, M. J. (2016). Investigating PPCP removal from wastewater by powdered activated carbon/ultrafiltration. *Water, Air, & Soil Pollution*, *227*, 1-14.

Salami, L. 1998. Pemilihan Metode Isolasi Kitin dan Ekstraksi Kitosan dari Limbah Kulit Udang Windu (Peneaus monodon) dan Aplikasinya sebagai Bahan Koagulasi Limbah Cair Industri Tekstil. *Skripsi*. Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Indonesia.

Sharma, G., Sharma, S., Kumar, A., Lai, C. W., Naushad, M., Shehnaz, ... & Stadler, F. J. (2022). Activated carbon as superadsorbent and sustainable material for diverse applications. *Adsorption Science & Technology*, *2022*, 4184809.

Simanjuntak, M. J. 2008. Studi Film Polyvinil Alcohol (PVA) Dimodifikasi dengan Acrylamide (AAm) sebagai Material Sensitif terhadap Kelembaban. *Skripsi*. Universitas Indonesia.

Sobarwiki, S. 2016. Simplified diagram of a UV-visible spectrometer. Diakses pada 29 Juni 2024 dari https://commons.wikimedia.org/wiki/File:Simplified_UV-vis_diagram.png.

Sobhan, A., Muthukumarappan, K., Cen, Z., & Wei, L. (2019). Characterization of nanocellulose and activated carbon nanocomposite films' biosensing properties for smart packaging. *Carbohydrate polymers*, *225*, 115189.

Sun, K. and Chun Jiang, J., 2010. Preparation and characterization of activated carbon from rubber-seed shell by physical activation with steam. *Biomass and bioenergy*, *34*(4), pp.539-544.

Sutono, N. A. (2017). Karakteristik Ampas Kopi Robusta (Coffea canephora) pada Berbagai Tingkat Penyangraian dan Suhu Penyeduhan. *Skripsi*. Fakultas Teknologi Pertanian Universitas Jember.

Teodorescu, M., Bercea, M. and Morariu, S., 2018. Biomaterials of poly (vinyl alcohol) and natural polymers. *Polymer Reviews*, *58*(2), pp.247-287.

Waluyo, A.F. and Sabarman, H., 2019. Fabrikasi Fiber Polyvinyl Alcohol (PVA) Dengan Elektrospining. *Gravity: Jurnal Ilmiah Penelitian dan Pembelajaran Fisika*, *5*(1).

Warono, D. and Ab, S., 2013. Unjuk Kerja Spektrofotometer Untuk Analisa Zat Aktif Ketoprofen. *Jurnal Konversi*, *2*(1).

Wijayati, D. T., & dkk. (2017). Model Peningkatan Produktivitas Berbasis Lingkungan pada Industri Kecil Olahan Kopi untuk Penguatan Industri Minuman Koridor Jawa. *Skripsi*. Universitas Negeri Surabaya.

Wiliastuti, R. A. 2007. Studi penumbuhan membran polyvinyl alcohol (pva) dengan variasi konsentrasi pva menggunakan metode spin coating di atas lapisan elektroda platinum. *Skripsi*. Universitas Sebelas Maret.

Yahya, M.A., Al-Qodah, Z. and Ngah, C.Z., 2015. Agricultural Bio-Waste Materials as Potential Sustainable Precursors Used for Activated Carbon Production: A Review. *Renewable and Sustainable Energy Reviews*, *46*, pp.218-235.